



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,716	12/10/2001	Mark R. Zaacks	ZAACKS=1	3640

1444 7590 11/08/2004
BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

EXAMINER

LE, TRAN Q

ART UNIT	PAPER NUMBER
----------	--------------

2633

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,716

Applicant(s)

ZAACKS ET AL.

Examiner

Tran Q. Le

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 10, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in 140207 on 12/10/2000. It is noted, however, that applicant has not filed a certified copy of the 140207 application as required by 35 U.S.C. 119(b).

Drawings

2. The drawings 1A and 1B are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference numerals 20 and 22 have both been used to designate optical elements of type A.

3. The drawings 3A, 3B, and 3C are objected to as failing to comply with 37 CFR 1.84(p)(4) because the same reference numeral 45 has been used to designate two exemplary optical elements A and B(p. 8, lines 17-18). The upper reference numeral 45 connecting to element A should be changed to 43 instead.

4. The reference label A(line 20, p. 9) indicating a network element is not shown in figure 5.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header(as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing

Art Unit: 2633

figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

The objection to the drawings will not be held in abeyance.

Specification

5. The specification is objected to because of the following informalities:

a) The reference numeral "58", in line 8 of page 9, generally used throughout the drawing of figure 4 for a plurality of various optical/non-optical elements(p. 9, lines 7 and 8), should be changed to different numerals instead to distinguish different optical/non-optical elements connecting to the cross-connect 52.

b) The reference numeral "66", in line 24 of page 9, generally used throughout the drawing of figure 5 for a plurality of various network elements B, C, and D(p. 9, lines 20 and 21), should be changed to different numerals instead to distinguish different network elements connecting to the optical matrix 64.

Appropriate correction is required.

c) The reference numeral "76", in line 7 of page 10, generally used throughout the drawing of figure 6 for a plurality of various optical/non-optical elements A, B, ...H(p. 9, lines 20 and 21), should be changed to different numerals instead to distinguish various network elements connecting to a plurality of optical switching devices.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Fee et al. (US Patent No: 5,726,788).

Regarding claim 1, Fee et al., hereafter, referred as Fee discloses an optical interface device for dynamically reconfiguring a telecommunications comprising: at least one optical switching device(308, fig.3 and col. 3, lines 9, 16) connectable to an optical network(fig. 3 and col. 6, lines 13-15) and a plurality of network elements(f1..f7, fig. 3, col. 4, lines 40-67, and col.5, lines 1-10) connectable to the said at least one optical switching device; wherein the optical switching device is controllable to selectively connect thereto and disconnect therefrom one or more of network elements for switching them in or off the network(fig. 3, col.2, lines 60-62, col.3, lines 8-16, fig. 6, and col. 7, lines 20-55). Note that the optical switch backplane is controlled by the controller to select which functional modules get connected to or disconnected from the optical path in the network.

Art Unit: 2633

Regarding claim 2, examiner can interpret a pre-manufactured module suitable for insertion into the optical network as all optical components are pre-designed before manufacturing (p.2, lines 8-25).

Regarding claim 3, Fee further discloses the elements connectable to the switching device(s) so that each of the elements can be either switched in the network, or bypassed (fig. 3, col.2, lines 60-62, col.3, lines 8-16, fig. 6, and col. 7, lines 20-55). Note that the optical switch backplane is controllable to select appropriate functional modules to be activated in the optical path in the network or switched off to external port.

Regarding claim 4, Fee teaches that network elements connectable to at least one optical switching device are selected from the non-exhaustive list comprising optical and non-optical components: amplifier, filter, multiplexer/demultiplexer (MUX/DEMUX), OADM (optical add-drop multiplexer), delay line, converting means, dispersion compensating device (col. 4, lines 49-67 and col. 5, lines 1-10).

Regarding claim 5, Fee discloses the optical switching devices selected from the following non-exhaustive list including: 1x2 optical bypass switches, 2x2 optical bypass switches, optical switching matrices $n \times m$ (col.5, lines 19-52), wherein the optical switching devices connectable to at least one of the network elements and capable of selectively setting each of the elements in one of two modes being a working mode and a bypass mode (fig. 3, col.2, lines 60-62, col.3, lines 8-16, fig. 6, and col. 7, lines 20-55). In other words, the optical switch backplane in Fee's invention is capable of selecting one function or sequentially

Art Unit: 2633

to multiple functions to be routed to the optical signal in the path(fig.3, col. 5, lines 53-67, and col.6, lines1-7), therefore, setting selected functions in the path active whereby leaving other functions as bypassed

Regarding claim 6, Fee discloses that his device and method are used for providing a flexible, on-demand reconfiguration of an optical telecommunications network(col. 1, lines 6-12); therefore, a reconfigurable network node can be achieved by comprising Fee's device(fig.3).

As to claim 7, Fee further discloses that the optical switch backplane can determine not only which functions are inserted in the optical path of the information carrying optical signal, but also in which order, i.e., how the signal is processed(col. 6, lines 4-7 and col. 7, lines 19-55). Therefore, a method of configuring/reconfiguring an optical network can be achieved by switching the module into a portion of the optical network, selecting one or more of the module's network elements to be introduced in the network according to a required configuration and considering the remaining network elements as non-selected, and forming connections in the module by controlling at least one optical switching device to set the non-selected elements in the bypass mode and the selected elements in the working mode according to the required configuration.

Regarding claim 8, Fee discloses the step of switching the module into the network is provided when upgrading is required(col. 1, lines 6-12 and col.2, lines 39-42)

Regarding claims 9 and 10, Fee also teaches that his device and method for controlling various optical telecommunications functions are dynamically reconfigurable to accommodate any of the signals and situations likely to be encountered in a telecommunications network(col. 2, lines 39-41), therefore, the step of pre-installing and switching the module into the network should be performed in advance, simultaneously with establishing the network.

As to claim 11, Fee discloses three objects of his invention are to be able to easily control the processing of any optical signal in a telecommunications network, to be able to quickly select a processing operation for any optical signal in a telecommunications network, and to be able to dynamically reconfigure an optical telecommunications network in case of partial failure(col. 2, lines 44-53), therefore, the step of forming the connections should be performed in a hitless manner.

8. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being further anticipated by Tervonen(International Publication No: WO 00/28670).

Regarding claim 1, Tervonen discloses a method of protecting an optical transmission connection comprising: at least one optical switching device(SW, fig.3) connectable to an optical network(p.3, lines 12-14) and a plurality of network elements(DEM1 and DEM2, fig. 3) connectable to the said at least one optical switching device; wherein the optical switching device is controllable to selectively connect thereto and disconnect therefrom one or more of said elements for switching them in or off the network(fig. 3 and p.8, lines 8-10). Note

Art Unit: 2633

that when switch SW is in a first position, optical path 1 gets connected and when switch SW is in its second position, path 2 gets connected.

Regarding claim 2, examiner can interpret a pre-manufactured module suitable for insertion into the optical network as all optical components are pre-designed before manufacturing (p.2, lines 8-25).

Regarding claim 3, Tervonen further discloses the elements connectable to the switching device(s) so that each of the elements can be either switched in the network, or bypassed(fig. 3 and p.8, lines 8-10). Note that when switch SW is in a first position, optical path 1 gets connected and when switch SW is in its second position, path 2 gets connected.

Regarding claim 4, Tervonen teaches that network elements connectable to said at least one optical switching device are demultiplexer-DEMUX(DEM1, DEM2, fig.3), converting means(C1, C2, fig. 3).

Regarding claim 5, Tervonen discloses the optical switching device is a 1x2 optical bypass switch, wherein the optical switching selectively sets each of the elements in one of two modes being a working mode and a bypass mode. In other words, the 1x2 bypass switch in Tervonen's invention is capable of selecting one of the two paths(PATH1, PATH2, fig.3) comprising elements DEM1 and DEM2, therefore, setting the network element in the selected path active whereby leaving other network element of the second path redundant or bypassed(p.8, lines 8-10).

Regarding claim 6, Tervonen discloses that his method may also be utilized in optical networks(p.2, lines 24, 25); therefore, a reconfigurable network node can be achieved by comprising Tervonen's system(fig.3).

As to claim 7, Tervonen further discloses that his system can be used in many different environments and in connection with many different network topologies(p.7, lines 27-31). Therefore, a method of configuring/reconfiguring an optical network can be achieved by switching the module into a portion of the optical network, selecting one or more of the module's network elements to be introduced in the network according to a required configuration and considering the remaining network elements as non-selected, and forming connections in the module by controlling at least one optical switching device to set the non-selected elements in the bypass mode and the selected elements in the working mode according to the required configuration.

Regarding claim 8, the step of switching the module into the network is provided when upgrading is required can be interpreted by examiner as having an optical point-to-point connections using implementation of the protection method as standby resources available in failure, maintenance, or upgrading situations(p.2, lines 8-12 and p.7, lines 27-31).

Regarding claims 9, 10 and 11, Tervonen also teaches that one of the most important features of the optical network or transmission system is improving the reliability by using the protection methods as standby resources available in any situations(p. 2, lines 8-11 and p.7, lines 27-31), therefore, the step of pre-installing and switching the module into the network should be

Art Unit: 2633

performed in advance, simultaneously with establishing the network. As to claim 11, Tervonen's invention provides reliability in the optical network or transmission system, which means the traffic in the network is always up and running even in case of faults, therefore, the step of forming the connections is performed in a hitless manner.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Levinson(US Patent No: 4,927,225) is cited to show a 2x2 optical bypass switch which channels incoming light to selected transmission elements in one of two possible states called the bypass and active states(fig. 1A, 1B).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran Q. Le whose telephone number is (571)272-2046. The examiner can normally be reached on Monday-Friday from 8 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

Art Unit: 2633

PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600